



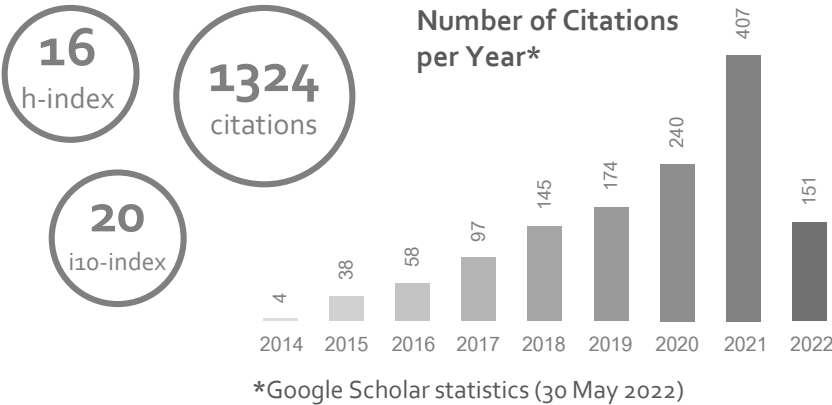
## Fabian D. Schneider

Research Scientist at NASA JPL

### Profile

I am a passionate research scientist with a PhD in Geography and a strong background in remote sensing, modeling and quantitative methods. I am interested in studying ecosystem diversity, health and productivity through measurements of plant traits and plant functional diversity using imaging spectroscopy and LiDAR. To understand the relationships and feedbacks between biodiversity and global change, I am combining remote sensing and process-based modeling, for example using radiative transfer or terrestrial biosphere models.

### Publications



Top 10 Publications & Number of Citations\*

Nature Plants	276	Jetz et al. (2016)
Nature Communications	172	Schneider et al. (2017)
Remote Sensing of Environment	171	Schaepman et al. (2015)
RSE	116	Schneider et al. (2014)
RSE	75	Kükenbrink, Schneider et al. (2017)
NewPhyt	70	Schimmel, Schneider et al. (2019)
AFM	62	Schneider et al. (2019)
JPlantPhys	56	Damm et al. (2018)
RSE	55	Cawse-Nicholson et al. (2021)
ERL	36	Schneider et al. (2020)

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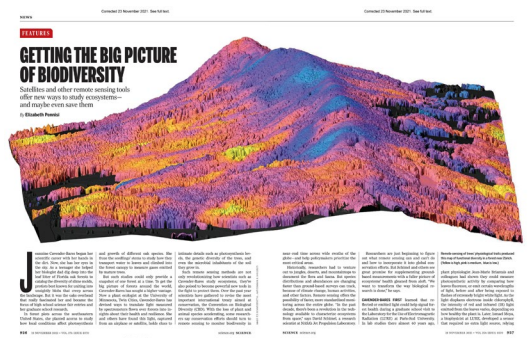
### Professional Experience

present Research Scientist, NASA JPL  
 2018 Postdoctoral Research Associate,  
 NASA JPL

### Education

2018 PhD, University of Zurich, Research  
 Priority Program on Global Change and  
 Biodiversity  
 2014 MSc in Geography, University of Zurich  
 2012 BSc in Geography, University of Zurich

### Selected News – Science Art



Science News Feature, 2021

### Grants



### Selected highlight:

Science-PI of BioCube: Integrating remote sensing and in-situ dimensions of biodiversity to understand plant and animal community composition and dynamics at large scales

## Curriculum Vitae

# Fabian Daniel Schneider

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Date of birth: 9 February 1987

## Education

2014-2018 **PhD candidate at the Remote Sensing Laboratories, University of Zurich**  
University Research Priority Program on Global Change and Biodiversity URPP GCB  
*PhD Thesis: Remotely sensing functional diversity of temperate forest ecosystems*

2011-2013 **Master of Science, University of Zurich**  
Major: Geography with specialization in Remote Sensing  
*MSc Thesis: Simulating imaging spectrometer data – 3D forest modeling based on lidar and in situ data*

2007-2011 **Bachelor of Science, University of Zurich**  
Major: Geography  
*BSc Thesis: Evaluation aktueller Fernerkundungsansätze zur Schätzung der Bruttoprimärproduktion auf kontinentaler und globaler Ebene*  
Minor: Computer Science  
*Term Paper: Automatic generalization and simplification of massive vector and network maps*

## Professional Experience

2021-present **Research Scientist II, NASA Jet Propulsion Laboratory, California Institute of Technology**

2018-2021 **Postdoctoral Research Associate, NASA Jet Propulsion Laboratory, California Institute of Technology**

## Teaching, Seminars and Supervision

2021 Invited seminar and teaching of the 1-week graduate course Modern Biology – Multidisciplinary approaches to Conservation Biology using remote sensing science and technology at the University of Puerto Rico:  
Lecture 1: Introduction to Imaging Spectroscopy  
Lecture 2: Remote Sensing of Plant Functional Traits, Diversity, and Ecosystem Function  
Seminar: Remote Sensing for Biodiversity Science and Conservation  
Lab course: Introduction to programming, imaging spectroscopy and geospatial analyses with Matlab and QGIS

2018 - 2019 Seminar talks at University of Wisconsin-Madison, namely in the Forest and Wildlife Ecology Seminar, and California Institute of Technology / Jet Propulsion Laboratory, namely in the Carbon Club and Imaging Spectroscopy Science Algorithms and Calibration Seminar (see also below: Invited Oral Presentations).

- 2017 - 2018 MSc co-supervision, Isabelle Helfenstein. Title: Mapping functional diversity from physiological forest traits at different spatial scales - upscaling from airborne imagery to satellite remote sensing
- 2014 - 2017 Teaching assistant for various courses within the Department of Geography, University of Zurich. Namely: *GEO113* Fernerkundung und Geographische Informationswissenschaft I - Earth Perspectives, *GEO123* Fernerkundung und Geographische Informationswissenschaft II - Introduction to Cartography and Geovisualisation, *GEO229* Small Group Teaching in Geography, *GEO233* Fernerkundung und Geographische Informationswissenschaft III - Grundlagen Fernerkundung;  
Seminar talk in *GEO441* Colloquium in Remote Sensing;  
Lead of the biodiversity journal club at the University of Zurich, URPP Global Change and Biodiversity

## Awards

- 2018 Distinction of the Natural Science Faculty of the University of Zurich for the PhD thesis
- 2014 Karl Kraus-Nachwuchsförderpreis, Karl Kraus Young Scientist Award (second place)
- 2013 Distinction of the Natural Science Faculty of the University of Zurich for the MSc thesis

## Grants

- In Review**      **JPL SRTD – Strategic Initiative Research and Technology Developments**  
**PI**                Biodiversity change: A new era for biodiversity monitoring from space (\$1M, 3Y)
- In Review**      **JPL SURP – Strategic University Research Partnerships**  
**PI**                Quantifying functional stability of California ecosystems using imaging spectroscopy after a decade of drought and fire (\$180K, 3Y)
- 2022 Awarded**    **JPL CAP – Center for Academic Partnerships**  
**PI**                Modern Biology – Multidisciplinary approaches to Conservation Biology using remote sensing science and technology (\$8K, 2W)
- 2022 Awarded**    **NASA ROSES A.7 BioSCape**  
**Co-I**             CapeTraits: Patterns of functional trait variation and diversity across the Greater Cape Floristic Region and comparison with other Mediterranean ecosystems (\$627K, 3Y)
- 2022 Awarded**    **NASA ROSES A.7 BioSCape**  
**Co-I**             BioSoundSCape: Connecting acoustics and remote sensing to study habitat-animal diversity across environmental gradients (\$596K, 3Y)
- 2022 Awarded**    **NASA ROSES A.7 BioSCape**  
**Collaborator**    Biodiversity across Scales: Mapping taxonomic, phylogenetic, and functional diversity with eDNA, Field Surveys, and Remote Sensing Data (\$195K, 3Y)
- 2021 Awarded**    **NASA ROSES A.7 Biodiversity**  
**Science-PI**      BioCube: Integrating remote sensing and in-situ dimensions of biodiversity to understand plant and animal community composition and dynamics at large scales (\$853K, 3Y)
- 2021 Awarded**    **NASA ROSES A.5 Carbon Cycle Science**  
**Co-I**             Functional diversity and the response of tropical forests to climate change (\$969K, 3Y)
- 2021 Awarded**    **NASA ROSES A.8 GEDI Science Team**  
**Co-I**             Functional diversity-biomass relationships across continents and intactness gradients (\$467K, 3Y)

## Invited Oral Presentations

- 2022 Remote Sensing for Biodiversity Science and Conservation. ASCEND BII Seminar, Virtual Meeting.
- 2022 Remote Sensing for Biodiversity Science and Conservation. Modern Biology Seminar, University of Puerto Rico, San Juan, Puerto Rico.
- 2021 Imaging Spectroscopy for Biodiversity Science: Plant spectra, traits, diversity and function across spatial scales. JPL Special Carbon Club Seminar, Virtual Meeting.
- 2021 The role of spatial scale in imaging spectroscopy of plant traits and plant functional diversity. SBG Modeling Working Group, Virtual Meeting.
- 2020 Biodiversity monitoring from space – towards large-scale mapping of functional diversity with imaging spectroscopy and lidar. Ecological Society of America Annual Meeting, Virtual Meeting, USA.
- 2020 Functional Diversity Algorithms for SBG. SBG Algorithms Working Group, Virtual Meeting.
- 2020 The future of remote sensing of biodiversity. World Biodiversity Forum, Davos, Switzerland.
- 2019 Mapping forest functional diversity and ecosystem functioning using remote sensing and ecological modeling. Forest and Wildlife Ecology Seminar, University of Wisconsin-Madison, Madison, USA.
- 2018 Remotely Sensing Functional Diversity of Temperate Forest Ecosystems. JPL Carbon Club Seminar, Jet Propulsion Laboratory, Pasadena, USA.
- 2018 BRDF correction of imaging spectroscopy data for plant functional trait mapping. Imaging Spectroscopy Science Algorithms and Calibration Seminar, Jet Propulsion Laboratory, Pasadena, USA.
- 2017 Remote sensing of functional diversity using morphological and physiological forest traits. British Ecological Society - Ecology Across Borders, Ghent, Belgium.

## Invited Workshops and Synergistic Activities

- 2022 World Biodiversity Forum (WBF): Towards a global biodiversity monitoring system, Co-Lead
- 2021-2023 sTRAITS: Integrating in-situ, upscaled and air- and spaceborne observations of plant traits, Participant (and contributed to workshop proposal)
- 2020 World Bank International Workshop of Experts, Disrupting Carbon Stock Dynamics Estimation for results-based payments, Participant
- 2020 National Science Foundation (NSF, award #1924942): Forest Structural Diversity, Participant
- 2018 Keck Institute for Space Studies (KISS): Unlocking a New Era in Biodiversity Science: Linking Integrated Space Based and In-Situ Observations, Participant
- 2015 National Center for Ecological Analysis and Synthesis (NCEAS): Prospects and priorities for satellite monitoring of global terrestrial biodiversity, Working group participant

**Journal Reviewer for:** Nature Communications, Nature Ecology and Evolution, Nature Geoscience, Remote Sensing of Environment, Remote Sensing, Global Change Biology, Environmental Research Letters, Methods in Ecology and Evolution, Ecological Applications, Biogeosciences, Applied Sciences, eLife Sciences, Journal of Ecology

**Subject Matter Editor for:** Ecological Applications (2020 – 2021)

**Proposal Reviewer for:** Expert Review Panel for the NASA Biological Diversity and Ecological Forecasting Program;  
Proposal review for the NASA Terrestrial Ecology Program

**Conference Session/Workshop Organizer for:**

- World Biodiversity Forum 2022, organized session “BEF2-a Functional diversity in space and time: measurements, models and experiments to advance trait-based ecology”, lead organizer and convener;
- World Biodiversity Forum 2022, workshop “WS\_Sun1 Towards a global biodiversity monitoring system”, co-lead
- Ecological Society of America Annual Meeting 2021, organized session “Advances in Biodiversity Science with Remote Sensing”, lead organizer and convener

**Tiger teams:** NASA’s Surface Biology and Geology (SBG) Tiger Team, Exploring Societal Benefits with ESRI (ESBE) Tiger Team

**Field campaigns:**

- NASA SBG High-Frequency Time-Series (SHIFT) campaign, Sedgwick Reserve and Dangermond Preserve, USA, April-May 2022 (~3 weeks), contributor / field assistant
  - Leaf sampling for foliar trait analyses
  - Vegetation survey (fractional cover measurements, floristic survey)
  - Field spectroradiometer measurements of various surfaces (vegetation, soil, rocks), leaf optical properties
- Lägern, Switzerland, various campaigns in 2013 – 2017, contributor / field assistant
  - Geodetic surveying of individual tree positions
  - Terrestrial laser scanning measurements of the temperate forest canopy structure
  - Unmanned aerial vehicle (UAV) measurements of the forest surface
  - Field spectroradiometer measurements of leaf optical properties
  - Sampling for genetic analyses
- Borneo, Malaysia, January (1 week) and October-November (4 weeks) 2015, lead organizer
  - Terrestrial laser scanning measurements of the tropical forest canopy structure
  - Field spectroradiometer measurements of leaf optical properties, and optical properties of bark and litter

**Airborne flight campaigns:**

- NASA SBG High-Frequency Time-Series (SHIFT) campaign, Sedgwick Reserve and Dangermond Preserve, USA, April-May 2022 (2 flight days), assistant operator (qualified non-crew member)
  - In-flight operation of the AVIRIS-NG imaging spectrometer
- NASA Biodiversity Survey of the Cape (BioSCape), planning for South Africa, September-November 2023
  - Airborne Planning working group co-lead

## **Additional information**

Mother tongue            German  
Additional languages    English (proficient), French (basic)

# List of Publications

## Published, Peer-Reviewed Articles

- Cavender-Bares, J., **Schneider, F.D.**, Joao Santos, M., Armstrong, A., Carnaval, A., Dahlin, K., Fatoyinbo, L., Hurtt, G.C., Schimel, D.S., Townsend, P.A., Ustin, S.L., Wang, Z., & Wilson, A.M. (2022). Integrating remote sensing with ecology and evolution to advance biodiversity conservation. *Nat. Ecol. Evol.*
- Helfenstein I.S., **Schneider F.D.**, Schaepman M.E., Morsdorf F. (2022). Assessing biodiversity from space: Impact of spatial and spectral resolution on trait-based functional diversity. *Remote Sens. Environ.* 275(March):113024
- Queally, N., Ye, Z., Zheng, T., Chlus, A., **Schneider, F.D.**, Pavlick, R. P., & Townsend, P. A. (2022). FlexBRDF: A Flexible BRDF Correction for Grouped Processing of Airborne Imaging Spectroscopy Flightlines. *Journal of Geophysical Research: Biogeosciences*, 127(1). <https://doi.org/10.1029/2021JG006622>
- Guillén Escribà, C., **Schneider, F.D.**, Tedder, A., Schmid, B., Furrer, R., Niklaus, P.A., Hueni, A., & Schaepman, M.E. (2021). Remotely sensed within-species functional trait variation of a temperate forest. *Ecology and Evolution*, 11(16), 10834–10867. <https://doi.org/10.1002/ece3.7758>
- Cawse-Nicholson, K., Townsend, P.A., Schimel, D., Assiri, A.M., Pamela, L.B., Buongiorno, M.F., Campbell, P., Nimrod, C., Casey, K.A., Correa-Pabón, R.A., Dahlin, K.M., Dashti, H., Dennison, P., Dierssen, H., Erickson, A., Fisher, J.B., Frouin, R., Gatebe, C.K., Gholizadeh, H., Gierach, M., Glenn, N.F., Goodman, J.A., Griffith, D.M., Guild, L., Hakkenberg, C.R., Hochberg, E.J., Holmes, T.R.H., Hu, C., Hulley, G., Huemmrich, K.F., Kudela, R.M., Kokaly, R.F., Lee, C.M., Martin, R., Miller, C.E., Moses, W.J., Muller-Karger, F.E., Ortiz, J.D., Otis, D.B., Pahlevan, N., Painter, T.H., Pavlick, R., Poulter, B., Qi, Y., Realmuto, V.J., Roberts, D., Schaepman, M.E., **Schneider, F.D.**, Schwandner, F.M., Serbin, S.P., Shiklomanov, A.N., Stavros, E.N., Thompson, D.R., Torres-Perez, J.L., Turpie, K.R., Tzortziou, M., Ustin, S., Yu, Q., Yusup, Y., Zhang, Q., & the Algorithms Working Group Community (2021). A compilation of surface imaging algorithms: NASA’s Surface Biology and Geology Designated Observable. *Remote Sensing of Environment*, 257, 112349. <https://doi.org/10.1016/j.rse.2021.112349>
- Lin, M., Simons, A.L., Curd, E.E., Harrigan, R.J., **Schneider, F.D.**, Ruiz-Ramos, D. V., Gold, Z., Osborne, M.G., Shirazi, S., Schweizer, T.M., Moore, T.N., Fox, E.A., Turba, R., Garcia-Vedrenne, A.E., Helman, S.K., Rutledge, K., Mejia, Maura P., Ramos, M.N.M., Wetzler, R., Pentcheff, D., McTavish, E.J., Dawson, M.N., Shapiro, B., Wayne, R.K., & Meyer, R.S. (2021). A Biodiversity Map of California Derived from Environmental DNA Metabarcoding and Earth Observation. *Ecological Applications*, 31(6), 1–18. <https://doi.org/10.1002/eap.2379>
- Rocchini, D., Marcantonio, M., Da Re, D., Bacaro, G., Feoli, E., Foody, G.M., Furrer, R., Harrigan, R.J., Kleijn, D., Iannacito, M., Lenoir, J., Lin, M., Malavasi, M., Marchetto, E., Meyer, R.S., Moudrý, V., Payne, D., **Schneider, F.D.**, Símová, P., Thornhill, A.H., Thouverai, E., Vicario, S., Wayne, R.K., & Ricotta, C. (2021). From zero to infinity: minimum to maximum diversity of the planet by spatio-parametric Rao’s quadratic entropy. *Global Ecology and Biogeography*, 30, 1153–1162. <https://doi.org/10.1111/geb.13270>
- Rocchini, D., Thouverai, E., Marcantonio, M., Iannacito, M., Da Re, D., Torresani, M., Bacaro, G., Bazzichetto, M., Bernardi, A., Foody, G.M., Furrer, R., Kleijn, D., Larsen, S., Lenoir, J., Malavasi, M., Marchetto, E., Messori, F., Montagni, A., Moudrý, V., Naimi, B., Ricotta, C., Rossini, M., Sanit, F., Santos, M.J., Schaepman, M.E., **Schneider, F.D.**, Schuh, L., Silvestri, S., Símová, P., Skidmore, A.K., Tattoni, C., Tordoni, E., Vicario, S., Zannini, P., & Wegmann, M. (2021). Rasterdiv – an Information Theory tailored R package for measuring ecosystem heterogeneity from space: to the origin and back. *Methods in Ecology and Evolution*, 12(6), 1093–1102. <https://doi.org/10.1111/2041-210X.13583>

- Ilangakoon, N., Glenn, N. F., **Schneider, F. D.**, Dashti, H., Hancock, S., Spaete, L., & Goulden, T. (2021). Airborne and Spaceborne Lidar Reveal Trends and Patterns of Functional Diversity in a Semi-Arid Ecosystem. *Frontiers in Remote Sensing*, 2(November), 1–17. <https://doi.org/10.3389/frsen.2021.743320>
- Zheng, Z., Zeng, Y., **Schneider, F.D.**, Zhao, Y., Zhao, D., Schmid, B., Schaepman, M.E., & Morsdorf, F. (2021). Mapping functional diversity using individual tree-based morphological and physiological traits in a subtropical forest. *Remote Sensing of Environment*, 252, 112170. <https://doi.org/10.1016/j.rse.2020.112170>
- Kükenbrink, D., **Schneider, F.D.**, Schmid, B., Gastellu-Etchegorry, J.-P., Schaepman, M.E., & Morsdorf, F. (2021). Modelling of three-dimensional, diurnal light extinction in two contrasting forests. *Agricultural and Forest Meteorology*, 296, 108230. <https://doi.org/10.1016/j.agrformet.2020.108230>
- Schneider, F.D.**, Ferraz, A., Hancock, S., Duncanson, L.I., Dubayah, R.P., Pavlick, R.P., & Schimel, D.S. (2020). Towards mapping the diversity of canopy structure from space with GEDI. *Environmental Research Letters*. <https://doi.org/10.1088/1748-9326/ab9e99>
- Morsdorf, F., **Schneider, F.D.**, Guillén-Escribà, C., Kükenbrink, D., Leiterer, R., & Schaepman, M.E. (2020). The Laegeren Site: An Augmented Forest Laboratory. In J. Cavender-Bares, J.A. Gamon & P.A. Townsend (Eds.). *Remote Sensing of Plant Biodiversity* (pp. 83-104). [https://doi.org/10.1007/978-3-030-33157-3\\_4](https://doi.org/10.1007/978-3-030-33157-3_4)
- Czyż, E.A., Guillen Escriba, C., Wulf, H., Tedder, A., Schuman, M.C., **Schneider, F.D.**, & Schaepman, M.E. (2020). Intraspecific genetic variation of a *Fagus sylvatica* population in a temperate forest derived from airborne imaging spectroscopy time series. *Ecology and Evolution*, 10 (14), 7419-7430. <https://doi.org/10.1002/ece3.6469>
- Paul-Limoges, E., Wolf, S., **Schneider, F. D.**, Longo, M., Moorcroft, P., Gharun, M., & Damm, A. (2020). Partitioning evapotranspiration with concurrent eddy covariance measurements in a mixed forest. *Agricultural and Forest Meteorology*, 280, 107786. <https://doi.org/10.1016/j.agrformet.2019.107786>
- Thonicke, K., Billing, M., Bloh, W., Sakschewski, B., Niinemets, Ü., Peñuelas, J., Cornelissen, J.H.C., Onoda, Y., van Bodegom, P., Schaepman, M.E., **Schneider, F.D.**, & Walz, A. (2020). Simulating functional diversity of European natural forests along climatic gradients. *Journal of Biogeography*, 47 (5), 1069-1085. <https://doi.org/10.1111/jbi.13809>
- Schneider, F. D.**, A. Ferraz, & Schimel, D. (2019). Watching Earth's interconnected systems at work, *EOS*, 100. <https://doi.org/10.1029/2019EO136205>
- Schneider, F. D.**, Kükenbrink, D., Schaepman, M. E., Schimel, D. S., & Morsdorf, F. (2019). Quantifying 3D structure and occlusion in dense tropical and temperate forests using close-range LiDAR. *Agricultural and Forest Meteorology*, 268, 249–257. <https://doi.org/10.1016/j.agrformet.2019.01.033>
- Schimel, D., **Schneider, F. D.**, & JPL Carbon and Ecosystem Participants (2019). Flux towers in the sky: global ecology from space. *New Phytologist*, 224 (2), 570–584. <https://doi.org/10.1111/nph.15934>
- Kükenbrink, D., Hueni, A., **Schneider, F. D.**, Damm, A., Gastellu-Etchegorry, J.-P., Schaepman, M. E., & Morsdorf, F. (2019). Mapping the Irradiance Field of a Single Tree: Quantifying Vegetation-Induced Adjacency Effects. *IEEE Transactions on Geoscience and Remote Sensing*, 57 (7), 4994-5011. <https://doi.org/10.1109/TGRS.2019.2895211>
- Damm, A., Paul-Limoges, E., Haghighi, E., Simmer, C., Morsdorf, F., **Schneider, F. D.**, van der Tol, C., Migliavacca, M., & Rascher, U. (2018). Remote sensing of plant-water relations: An overview and future perspectives. *Journal of Plant Physiology*, 227, 3-19. <https://doi.org/10.1016/j.jplph.2018.04.012>

- Fawcett, D., Verhoef, W., Schläpfer, D., **Schneider, F. D.**, Schaepman, M. E., & Damm, A. (2018). Advancing retrievals of surface reflectance and vegetation indices over forest ecosystems by combining imaging spectroscopy, digital object models, and 3D canopy modelling. *Remote Sensing of Environment*, 204, 583–595. <https://doi.org/10.1016/j.rse.2017.09.040>
- Morsdorf, F., Kükenbrink, D., **Schneider, F. D.**, Abegg, M., & Schaepman, M. E. (2018). Close-range laser scanning in forests: towards physically based semantics across scales. *Interface Focus*, 8(2), 20170046. <https://doi.org/10.1098/rsfs.2017.0046>
- Schneider, F. D.**, Morsdorf, F., Schmid, B., Petchey, O. L., Hueni, A., Schimel, D. S., & Schaepman, M. E. (2017). Mapping functional diversity from remotely sensed morphological and physiological forest traits. *Nature Communications*, 8 (1), 1441. <https://doi.org/10.1038/s41467-017-01530-3>
- Yamasaki, E., Altermatt, F., Cavender-Bares, J., Schuman, M. C., Zuppinger-Dingley, D., Garonna, I., **Schneider, F.D.**, Guillén Escribà, C., van Moorsel, S.J., Hahl, T., Schmid, B., Schaepman-Strub, G., Schaepman, M.E., & Shimizu, K. K. (2017). Genomics meets remote sensing in global change studies: monitoring and predicting phenology, evolution and biodiversity. *Current Opinion in Environmental Sustainability*, 29, 177–186. <https://doi.org/10.1016/j.cosust.2018.03.005>
- Morsdorf, F., Eck, C., Zraggen, C., Imbach, B., **Schneider, F. D.**, & Kükenbrink, D. (2017). UAV-based LiDAR acquisition for the derivation of high-resolution forest and ground information. *Leading Edge*, 36 (7), 566-570. <https://doi.org/10.1190/tle36070566.1>
- Kükenbrink, D., **Schneider, F. D.**, Leiterer, R., Schaepman, M. E., & Morsdorf, F. (2017). Quantification of hidden canopy volume of airborne laser scanning data using a voxel traversal algorithm. *Remote Sensing of Environment*, 194, 424–436. <https://doi.org/10.1016/j.rse.2016.10.023>
- Jetz, W., Cavender-Bares, J., Pavlick, R., Schimel, D., Davis, F. W., Asner, G. P., Guralnick, R., Kattge, J., Latimer, A.M., Moorcroft, P., Schaepman, M.E., Schildhauer, P., **Schneider, F.D.**, Schrod, F., Stahl, U. & Ustin, S. L. (2016). Monitoring plant functional diversity from space. *Nature Plants*, 2 (3), 16024. <https://doi.org/10.1038/nplants.2016.24>
- Schaepman, M.E., Jehle, M., Hueni, A., D’Odorico, P., Damma, A., Weyermann, J., **Schneider, F.D.**, Laurent, V., Popp, C., Seidel, F.C., Lenhard, K., Gege, P., Kuchler, C., Brazile, J., Kohler, P., De Vos, L., Meuleman, K., Meynart, R., Schläpfer, D., Kneubühler, M. & Itten, K.I. (2015). Advanced radiometry measurements and Earth science applications with the Airborne Prism Experiment (APEX). *Remote Sensing of Environment*, 158 (1), 207–219. <https://doi.org/10.1016/j.rse.2014.11.014>
- Schneider, F. D.**, Leiterer, R., Morsdorf, F., Gastellu-Etchegorry, J.-P., Lauret, N., Pfeifer, N., & Schaepman, M. E. (2014). Simulating imaging spectrometer data: 3D forest modeling based on LiDAR and in situ data. *Remote Sensing of Environment*, 152, 235–250. <https://doi.org/10.1016/j.rse.2014.06.015>

## Articles in Preparation/Revision

- Schneider, F.D.**, Longo, M., Paul-Limoges, E., Scholl, V.M., Schmid, B., Morsdorf, F., Pavlick, R.P., Schimel, D.S., Schaepman, M.E., & Moorcroft, P.R. (in review). Remote sensing-based forest modeling reveals positive effects of functional diversity on productivity at local spatial scale.